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e mechanism of action of adrenaline on the superior
rvical ganglion of the cat.

xperiments have been done on the mechanism whereby
renaline interferes with transmission in the superior
rvical ganglion of the cat anaesthetised with chloralose.
1. Adrenaline injected intra-arterially into the
nglion with an intact blood supply greatly reduces the
nglion action potentials resorde between the ganglion and
s postganglionis trunk. There is no accompanying de-
larization of the ganglion. The shape of the action
tential after adrenaline did not resemble that seen
ternicotine or hexamethonium but corresponded to an
en reduction of spike and after potential together.

2. The effect of adrenaline intra-arterially on
etlycholine output from a superior cervical ganglion per-
sed with eserinised Locke solution, and stimulated for
riods of 3 min at 10/sec. through its preganglionic
unk was tested. The effluent was assayed on the dorsal
scle of the leech, due allowance being made for the
nsitization which adrenaline produces on the responses
the leech to acetylcholine. The output of acetylcholine
om the superior cervical ganglion was considerably
luced in the presence of adrenaline: e.g. 1 µg adrenaline
vered the output by 50%.

3. Adrenaline antagonises the stimulant effect of
tylcholine injected into the ganglion perfused with
-eserinised Locke solution, roughly in parallel with
reduction of ganglionic transmission.

It was concluded that adrenaline interferes with gang-
nic transmission in two ways:-
by diminishing the release of acetylcholine in response
preganglionic stimulation.
by depressing the action of acetylcholine on the
nglion cells. In its possession of these properties
seems to resemble a drug such as procaine amide more
osely than any other ganglionically active drug.